

# **K-12 SCHOOL FUNDING COURT DECISION: FISCAL DATA REQUIREMENTS/OPTIONS**

A Report Prepared for the

**Legislative Finance Committee**

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October 6 2004

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## **INTRODUCTION**

The Sherlock decision in *Columbia Falls v. Montana* found the state share of school district spending inadequate, and found that Montana's funding formula is not reasonably related to the costs of providing a basic system of free quality public elementary and secondary schools. The case was appealed to the Montana Supreme Court in June 2004. If the Montana Supreme Court affirms the Sherlock opinion, the legislature may have to:

- Define the educationally relevant elements of a basic system of free quality public elementary and secondary schools;
- Determine the costs of delivering the resources required by that system for both operating and capital expenses;
- Devise a funding formula in law that will determine the state's share of school districts' resources; and
- Revise or augment state and district revenues required to pay for the system.

## **PURPOSE OF THIS REPORT**

The purpose of this report is to provide the Legislative Finance Committee (LFC) and the legislature with an overview of the task ahead in developing a new funding methodology and cost for K-12 education, and to explore what the LFC and staff might do to begin preparations in advance of the 2005 session. This report will provide background information on the school funding litigation issue, discuss what other states have done relative to adequacy studies, explain complexities of school funding, discuss significant issues, and provide options for consideration by LFC. This information will be provided in the following sections:

- 1) The lawsuit.
- 2) How other states have responded to adequacy lawsuits.
- 3) Montana studies.
- 4) Timeframes, data needs, and staff resources.
- 5) Issues.
- 6) Conclusion.
- 7) Options for consideration by Legislative Finance Committee.

## **BACKGROUND INFORMATION**

### **THE LAWSUIT - COLUMBIA FALLS V. STATE OF MONTANA**

#### **Plaintiffs Argument**

Between January 20 and February 4, 2004, the Helena District Court under Judge Jeffery Sherlock heard testimony in the *Columbia Falls* Suit. The Plaintiffs argued that the state's system of funding schools in Montana was inadequate and distributed inequitably. The plaintiffs asked for the following remedies, that the court provide declaratory and injunctive relief, compelling the State of Montana to:

- 1) study and determine the components of free quality public elementary and secondary education;
- 2) study and determine the costs of delivering that quality education to all students in Montana, including costs that vary based on student or district characteristics;
- 3) implement a funding system that is based on educationally relevant factors and tailored to meet the costs of delivering a quality education;

- 4) fully fund, and equitably distribute, the State's share of the cost of the public elementary and secondary school system;
- 5) include a cost adjustment factor in the funding system; and
- 6) establish a mechanism for periodic monitoring of and adjustment to the funding system to assure it reflects current costs of delivering quality education, and to prevent a recurrence of the historical trends of declining state support and failure to keep pace with increasing costs<sup>1</sup>.

## **Court Findings**

Judge Sherlock delivered his opinion on April 15th, 2004. The Sherlock opinion contained 199 findings of fact and several conclusions of law, each of which must be reviewed in detail before proceeding with any attempted compliance with the ruling. Two of the most important follow:

Finding 160. In sum evidence of the state's failure to adequately fund its share of the elementary and secondary school system in Montana is evidenced by the following:

- 1) The growing number of school districts budgeting at or near their maximum budget authority;
- 2) The increasing number of schools with accreditation problems;
- 3) The difficulty in attracting and retaining teachers, which is based to a large degree, on the decreasing salaries and benefits that are offered to Montana teachers compared to their counterparts in the United States;
- 4) The large number of programs that have been cut in recent years as evidenced by the testimony of numerous superintendents;
- 5) The increasing difficulties that schools are having constructing safe and adequate buildings or maintaining the code compliance of the buildings that currently exist;
- 6) The increasing competition for general fund dollars between special education and regular education, which lowers the available money to students in regular education programs;
- 7) The results of an Augenblick and Myers Study;
- 8) The testimony of various superintendents that, if they were forced to provide their educational programs at the BASE general fund amount, they could not meet accreditation standards or offer a quality educational program;
- 9) The declining share of the State's contribution to the general fund budget of Montana's school districts;
- 10) The fact that Montana's funding formula is not reasonably related to the costs of providing a basic system of quality public elementary and secondary schools. Further, it is clear that the current funding system was not based on a study of the funding necessary to meet what the state and federal governments expect of Montana's schools;
- 11) The fact that the Montana Supreme Court has stated that it is the State's obligation to adequately fund its share of the school financing formula (Helena Elementary I, 236 Mont. at 55, 769 P.2d at 690);
- 12) The fact that the Montana Supreme Court noted that "[i]n 1972, when our Constitutional Convention met, approximately 65% of General Fund revenues were funded through the Foundation Program.

Finding 195. In this finding, the Sherlock opinion states:

"195. A particular requirement is that the funding system must be based on educationally-relevant factors. This requires that the funding system be based on the costs of meeting the standards that govern the operation of Montana's schools. Once adequate levels of funding are

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<sup>1</sup> Complaint in Columbia Falls v. State of Montana, Molloy and Gallik, October 9, 2003, pg 15.

determined, the State must then fund its share of the cost of the system. The State's share must be an amount that is adequate at the BASE or foundation levels to allow districts to meet the standards. As previously established, this applies not only to general funds, but to the overall costs of the elementary and secondary system. In accomplishing this, it would be appropriate for the State to include a reasonable phase-in plan for implementing a new funding system<sup>2</sup>."

The court rejected the plaintiff's contention that the system was inequitably funded.

## **Court Conclusions**

In the Conclusions of Law and Order, Sherlock wrote:

"7. ...there is no question that the current funding system is not reasonable, since the overwhelming evidence supports Plaintiffs' contention that the funding system and the classifications contained therein are not based on educationally-relevant factors.

8. This Court hereby rules that the current state funding system violates Article X, Section 1(2) of the Montana Constitution in that the State has failed to recognize the distinct and unique cultural heritage of American Indians and has shown no commitment in its educational goals to the preservation of their cultural identity.

9. This Court hereby rules that the current Montana school funding system violates Article X, Section 1 of the Montana Constitution in that it fails to provide adequate funding for Montana's public schools.

10. This Court further rules that the State of Montana has violated Article X, Section 1 of the Montana Constitution in that the State is not paying its share of the cost of the basic elementary and secondary school system.

11. With respect to Montana's accreditation standards, this Court concludes that certain Conclusions of Law found by the Montana Supreme Court in Helena Elementary I remain accurate to this day. "Thus, the Montana School Accreditation Standards do not fully define either the constitutional rights of students or the constitutional responsibilities of the State of Montana for funding its public elementary and secondary schools." 236 Mont. at 52, 769 P.2d at 692.

12. This Court takes into account the fact that some of the damage that the educators testified to at trial is prospective in nature. However, this evidence is persuasive and relevant. Just as the Montana Supreme Court did not feel it necessary to wait for "dead fish [to] float on the surface of our state's rivers and streams before its farsighted environmental protections can be invoked" (MEIC, 77), this Court finds that it should not have to wait until Montana's school system collapses in financial ruin prior to entering an order this case.

13. To satisfy the Montana Constitution, the State's school finance system must be based upon determination of the needs and costs of the public school system, and the school finance system must be designed and based upon educationally-relevant factors<sup>3</sup>."

## **State Appeal**

In June, the State appealed the decision to the Supreme Court. On August 9, 2004, the State presented its brief in the case to the Supreme Court. The brief argues that the claims of the plaintiffs in Columbia Falls v. Montana present non-justiciable political questions, and that the district court erroneously declared Montana's school funding system unconstitutional beyond a reasonable doubt when it ignored

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<sup>2</sup> Findings of Fact, Conclusions of Law and Order, Judge Sherlock, First Judicial District Court, in Columbia Falls v. State of Montana, April 15<sup>th</sup>, 2004.

<sup>3</sup> Ibid, pgs 50-51.

or failed to distinguish countervailing evidence<sup>4</sup>. On August 30, 2004, the plaintiffs' reply disputed the political question and asserted that the district court correctly rejected the State's factual defenses. In addition, the reply contained a cross-appeal brief in which the plaintiffs argue that the Sherlock decision on the equity question was erroneously decided (does the current system violate equal protection guarantees). The plaintiffs' reply also requested that the effective date by which a new funding scheme be in place be advanced from October 1, 2005 (as in the Sherlock Decision) to May 1, 2005, in time to provide relief to the school system for the 2005-06 school year<sup>5</sup>.

## **Legislative Leadership/BPE Sequence of Events**

The Sherlock Decision was published on April 15, 2004. The decision was appealed to the Supreme Court in June 2004. On July 19, 2004, Clayton Schenck, Legislative Fiscal Analyst (LFA), wrote to legislative leadership requesting a conference call on July 27 for a preliminary discussion on the existing school funding lawsuit with regard to data research requirements and fiscal staff task options.

The issues raised by the LFA were:

- The legislature needs to be aware of the significant amount of fiscal data accumulation, research, and analysis required to do a complete school funding study, the resources and timeframes needed to accomplish the task, and needs to begin planning for this task in advance of the legislative session.
- The Sherlock decision seems to require at a minimum that the cost of the accreditation standards must be determined. A study of that type was done in 1988. Should another study of that type be done and who would do it?
- Should a preliminary, benchmark study of the cost of the accreditation standards be done before the legislative session? If so, does legislative leadership support a cooperative effort to compile data and do research between the Legislative Fiscal Division (LFD), the Office of Budget and Program Planning (OBPP), and the Board of Public Education (BPE)?

During the conference call and other discussions, members of leadership expressed the general view was that it is too early to initiate a funding study because the legislature needed to first determine what are educationally relevant factors. Most rejected the idea of a cooperative effort between the LFD, OBPP and BPE. This was expressed in a letter from Mr. Schenck to the executive and to BPE on August 19, 2004. Although it was recognized that it is too early to do a funding study to develop a new methodology in response to the lawsuit, there was some support from leadership for a study of existing accreditation standards to get a "benchmark" of what existing standards cost.

On July 29, 2004 Greg Petesch, chief legal counsel to the legislature, wrote to Representative Wanzenried regarding the duties of the LFD and OBPP in establishing the "present law base" for the 2007 biennium. The opinion stated that if the Supreme Court rules with Sherlock, "the "present law base" would appear to be largely meaningless because invalidating the current funding system would be likely to invalidate the legal ability to maintain operations and services at the level authorized by the previous legislature".

As stated above, on August 19, 2004, Mr. Schenck wrote to OBPP and BPE of the results of the conference call. In addition, the letter contained a statement that the leadership was interested in a

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<sup>4</sup> Brief of Appellant to the Montana Supreme Court in Columbia Falls v. State of Montana, McGrath and Morris, August 9, 2004.

<sup>5</sup> Respondents Answer and Cross Appeal Brief to the Montana Supreme Court, in Columbia Falls v. State of Montana, Molloy and Gallik, August 30, 2004.



“benchmark” study which would cost out the accreditation standards, and that the LFD was assessing what resources would be required, the methodology and consultant options, as well as other factors in assessing the full cost of a quality education.

Representatives of a variety of education advocacy groups (e.g. Montana Quality Education Coalition (MQEC), Montana Education Association (MEA-MFT), Montana Rural Education Association (MREA), Montana School Boards Association (MTSBA), and School Administrators of Montana (SAM)) challenged the proposed scope of the LFD study. The primary objection was based on findings of both the Montana Supreme Court and Judge Sherlock that “the Montana school accreditation standards do not fully define either the constitutional rights of students or the constitutional responsibilities of the State of Montana for funding its public elementary and secondary schools.” (See conclusion 11, and the Montana Supreme Court opinion at 236 Mont. 52).

This report represents some of those efforts to assess the market for education studies conducted in other states, what methods were used, what they cost, how long they take, and who the consultants are.

## **HOW OTHER STATES HAVE RESPONDED TO ADEQUACY LAWSUITS**

There have been school funding adequacy suits in 30 states in the last 15 years. At the end of 2003, suits in eight states have been rejected or dismissed by the courts or have been withdrawn by plaintiffs<sup>6</sup>. Courts in six states have found for the plaintiffs. The remaining 16 state suits were still undecided without a final determination of the case, as of February 2004.

These data are from a report done by the National School Boards Association, as of February 2004. A very recent article in the Austin Chronicle of data compiled by the Campaign for Fiscal Equity states that adequacy suits have been litigated in 27 states, in which plaintiffs have won 23 times, at least in the first court<sup>7</sup>. This contradicts the NSBO data, and the discrepancy will be investigated.

In some of the states in which plaintiffs successfully sued on adequacy grounds, courts have ordered adequacy studies. Other states have ordered that adequacy studies be conducted without court pressure in response to No Child Left Behind (NCLB) or other internal pressures.

## **WHAT ARE ADEQUACY STUDIES?**

An adequacy study is a publicly reported attempt by state officials, special interest groups, or independent researchers to apply an empirical methodology to estimate the costs of providing an adequate public education at the elementary and/or secondary level<sup>8</sup>. Most studies consider only operating costs of schools and ignore transportation and capital outlay. Judge Sherlock’s opinion, however, requires that capital outlay and other items be addressed by the study required under his ruling. (See finding 192, where Judge Sherlock notes that “it is important to further recognize and find that the State’s constitutional obligations are not limited to general fund budgets. Rather the cost of the basic

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<sup>6</sup>National School Boards Association, School Finance Litigation Table, February 2, 2004, at <http://www.nsba.org/cosa2/nsfn/index.htm>.

<sup>7</sup>[http://www.austinchronicle.com/issues/dispatch/2004-10-01/pols\\_feature4.html](http://www.austinchronicle.com/issues/dispatch/2004-10-01/pols_feature4.html), October 1, 2004. and <http://www.schoolfunding.info/>, Campaign for Fiscal Equity.

<sup>8</sup> The majority of this section is taken from “Measuring Educational Adequacy in Public Schools”, Bruce D. Baker (University of Kansas), Lori Taylor and Arnold Vedlitz (Texas A&M), 2003 at <http://www.capitol.state.tx.us/psf/Reports/Measuring%20Educational%20Adequacy.pdf>

system includes all costs, whether funded through the general fund or other funds, including such significant funds as capital outlay/debt service, retirement and transportation.”)

Education adequacy studies attempt to determine an adequate level of resource use to achieve an adequate level of student performance. Student performance between schools may vary for many reasons: different student populations, different skill levels of teachers and administrators, different levels of support services, size of school, etc. Some schools have higher costs because: 1) some schools prefer to spend more to get higher results, 2) some schools have challenged environments (i.e. high ratios of students that are at-risk, special needs, or minority status), 3) some schools face size diseconomies, and 4) some schools don’t operate as efficiently as they could. No cost study is superior at accounting for all these differences. As will be discussed later, each type of study has its strengths and weaknesses.

The reasons why cost studies are conducted are many: 1) at the order of a court, 2) at the behest of a legislature attempting to “rationalize” its system of education funding, 3) under the auspices of members of the education community (school boards, unions, taxpayers), or 4) because of the increasing student performance demands of NCLB.

## **Types of Approaches**

These studies can be categorized in a couple ways. First, there are three major categories of adequacy studies: average expenditure studies, resource cost studies, and statistical modeling studies.

### ***Average Expenditure Studies***

With the advent of state standards and assessments, consultants and state policymakers turned to studies, which focused on average expenditures of schools, or districts, which met a prescribed set of standards. This approach was coined the Successful School Model.

Successful Schools studies use outcome data on measures such as attendance, dropout rates, and student test scores to identify that set of schools or districts in a state that meet a chosen standard of success. Then the average of the expenditures of those schools or districts is considered adequate (on the assumption that some schools in the state are able to be successful with that level of funding). “Modified Successful Schools” analyses include some consideration of how schools use their resources. This is done in either of two ways. In most cases, analysts may use data on how schools use their resources to identify and exclude peculiar, or outlier, schools or districts from the Successful Schools sample. Alternatively, one might seek patterns in resource allocation to identify those schools that allocate resources in such a way as to produce particularly high outcomes, with particularly low expenditures.

The expert primarily credited with creating the “Successful Schools” approach to studying school finance is John Augenblick, formerly of Augenblick & Myers and now of Augenblick, Palaich and Associates. Mr. Augenblick has previously opined that Montana at that time (2002) lacked the circumstances necessary to credibly use the Successful Schools approach to study adequacy. Specifically, Augenblick cited the fact that Montana’s school funding system was artificially capped in the general fund and the fact that Montana lacked sufficient data from Criterion Referenced tests to credibly apply this methodology in Montana. However, in the last few years Montana schools have faced soft caps on their general fund where, if voters approve, general fund budgets may exceed the maximum budget. Furthermore, Criterion Referenced tests as of school year 2005 are now being employed in Montana.

## ***Resource Cost Studies***

The “Resource Cost Model” (RCM) is a method that has been used extensively for measuring the costs of educational services. In general, RCM is a method for measuring costs of services, existing or hypothetical, adequate or not. The RCM methodology typically involves three steps: (1) identifying and/or measuring the resources (people, space, time, and staff) used in providing a particular set of services; (2) estimating resource prices and price variations from school to school or district to district; and (3) tabulating total costs of service delivery by totaling the resource quantities (resource intensity) and their prices.

RCM has been used for calculating the cost of providing adequate educational services since the early 1980s. Two relatively new (circa 1997) variants of RCM have been specifically tailored to measure the costs of an “adequate” education: 1) “Professional Judgment” driven RCM (See Appendix B for a comparison of some professional judgment studies and the typical elements they contain); and 2) “Evidence-Based” RCM. The difference between them lies in the strategy for identifying the resources required to provide an adequate education. In Professional Judgment studies, focus groups of educators and policymakers are typically convened to prescribe the “basket of educational goods and services” required for providing an adequate education. In Evidence-Based studies, resource needs are derived from “proven effective” school reform models.

Early Evidence-Based studies focused on Comprehensive School Reform (CSR) models, such as Robert Slavin’s “Roots and Wings/Success for All” model. More recently, Evidence-Based analyses have strived to integrate a variety of “proven effective” input strategies such as class size reduction, specific interventions for special student populations, and comprehensive school reform models, rather than relying on a single reform model.

Judge Sherlock has specified in his ruling that the Professional Judgment methodology used by Augenblick & Myers “although not perfect, certainly is a good start.” (See finding 156). Judge Sherlock has further specified that the Professional Judgment methodology is not sufficient standing alone, as the entire basis of the school funding system. (See findings 153 and 193 for information on gaps not addressed in the A&M study).

## ***Statistical Modeling Studies***

Less common among recent analyses of educational adequacy are statistical methods that may be used to estimate the costs associated with achieving a specific set of outcomes in different districts serving different student populations. This method is known as the education “Cost Function.” Like Successful Schools analysis, these analyses require policymakers to establish explicit, measurable outcome goals.

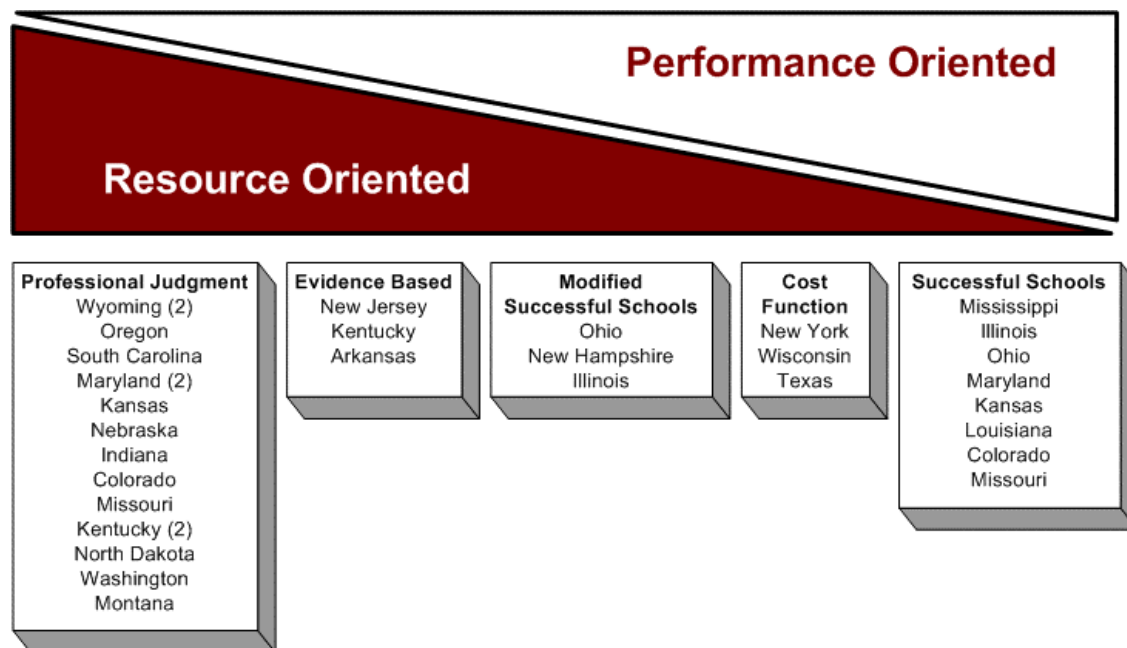
Cost Function analyses use statistical equations. A cost function that has been estimated with existing data on district spending levels and outcomes, and including data on district and student characteristics, can be used for predicting the average cost of achieving a desired level of outcomes in a district of average characteristics serving a student population of average characteristics. Further, the Cost Function can be used to generate a cost index for each district that indicates the relative cost of producing the desired outcomes in each district. For example, it would likely be found that per pupil costs of achieving target outcomes are higher than average in small, rural districts, that costs are higher in districts with high percentages of economically disadvantaged and limited English proficient children, and that costs are higher where competitive wages for teachers are higher.

To date, outcome measures used in Cost Function studies have been narrowly specified, including primarily measures of student achievement in core subject areas. Judge Sherlock specifically mentions that this methodology has not been used by any state to test adequacy. However, recently three states have done so.

## Resource-Oriented Versus Performance-Oriented Studies

This is a second way to categorize adequacy studies. Education adequacy studies can be found on a continuum between those that are resource oriented and those that are student performance oriented. Resource oriented studies depend on experts or proven models of learning to specify the resources required to achieve a level of student performance that is assumed will prevail. Performance oriented studies require explicit levels of required student performance, and cost out the resources of schools which have successfully achieved that level of student performance, either through a Successful School approach or through statistical means. Each method has strengths and weaknesses, which will be discussed in the following section.

The figure below shows types of studies conducted in various states between 1993 and 2003.



Adequacy studies have been conducted in 30 states. As of September 2004, adequacy studies in only four states – Maryland, Arkansas, Ohio and Wyoming – have become the basis for state education funding. Some states – Maryland, Kansas, New York, Colorado Missouri and Kentucky – have conducted two studies using alternative methods. (See Appendix A for a list of states in which adequacy studies have been done).

Professional Judgment and Evidence-Based studies are more expensive and take longer to perform than Successful Schools and Cost Function studies. The former typically take between 6 months and a year and half to conduct, and in addition to costs of consultants, costs also include opportunity costs to the school professionals involved in the panels. The latter two methods can be done in less than 8 months and typically are cheaper. The limiting factor in Cost Function studies is availability of data on student outcomes, student demographics, teacher characteristics and wages. . It should also be noted that the

Augenblick & Myers approach undertaken by education advocates in Montana took less than 6 months to complete. School districts largely shouldered the financial burden of panel participants, including mileage, meals and hotel rooms.

Adequacy studies have not been broadly adopted into state funding formula's for several reasons. In states in which two studies of different types – professional judgment and successful schools – have been employed, successful school approaches yielded substantially lower cost estimates than the professional judgment approach. In Kansas, for example, the use of two different study methods produced results that were more than 25 percent apart, forcing policymakers to wonder which (if either) of the findings were correct. The limitations and variations of adequacy studies leave policymakers with little solid ground on which to base their decisions.

In addition, there has not yet been an adequacy study that has found that sufficient money was being provided for a state's education system (except recently in Texas and Minnesota)<sup>9</sup>. Overall, these studies generally find that an additional 20 percent to 40 percent would be required to provide an adequate education.

Further, many adequacy studies presume that existing resources within the education system are being spent in the most efficient manner possible. Critics argue that reallocating existing resources could, in itself, produce an adequate education system. This area of research has yet to be examined thoroughly.

It is likely that as a result of NCLB, states will see more adequacy studies conducted because of its emphasis on data collection and accountability. The act requires that student performance information be collected at the school level and in four student categories: minority, low-income (at-risk), special education, and English language learner. With more specific data on these different student populations, plaintiffs will be able to focus narrowly, highlight specific damage accrued by certain groups of students and bring claims on their behalf. There may also be potential for plaintiffs to bring suit in federal courts, given the significant federal role over NCLB<sup>10</sup>.

## **STRENGTHS AND WEAKNESSES OF ADEQUACY STUDIES**

In a paper by Bruce Baker, Lori Taylor and Arnold Vedlitz<sup>11</sup>, the following strengths and weaknesses of the various adequacy studies were outlined. They are:

### **Resource-Oriented Methods**

#### ***Strengths***

In the policy context, the primary strength of resource-oriented methods, like professional-judgment models or Evidence-Based analyses, is that the methods are relatively simple and transparent and produce easily understood results. That is, resource-oriented models appear not to involve more complex statistical modeling. Of course, well-designed resource-oriented models require researchers to use

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<sup>9</sup>[http://www.mysanantonio.com/news/education/stories/MYSA090904.1B.schools\\_suit.6413b3d7.html](http://www.mysanantonio.com/news/education/stories/MYSA090904.1B.schools_suit.6413b3d7.html). (Texas), and at <http://www.mntax.org/cpfr/education.php#faq> (Minnesota)

<sup>10</sup>These observations on future trends in adequacy studies were made by Steve Smith, National Conference of State Legislatures, in "Litigation in Education", *State Legislatures*, September 2004.

<sup>11</sup>"Measuring Educational Adequacy in Public Schools", Bruce D. Baker (University of Kansas), Lori Taylor and Arnold Vedlitz (Texas A&M), 2003 at <http://www.capitol.state.tx.us/psf/Reports/Measuring%20Educational%20Adequacy.pdf>

statistical modeling to determine market prices for educational inputs, and professionals frequently rely on statistical analysis to form their opinions. So input-driven models are probably best described as filtered versions of statistical models.

Because achieving consensus regarding desired educational outcomes can be difficult and precise measurement of those outcomes even more complicated, one advantage of resource-oriented analyses is that they avoid these complexities altogether. Professional Judgment approaches can also incorporate outcomes that are difficult to measure, while outcome-based analyses can only estimate the costs associated with measurable outcomes.

### ***Weaknesses***

In an era of increasing emphasis on educational standards and accountability, it can be difficult to justify a cost figure for an “adequate education,” where that cost figure is, at best, indirectly linked to student outcomes.

While proponents of Evidence-Based analysis infer a strong connection between specific comprehensive school reforms and improved outcomes, research evidence regarding the effectiveness and more specifically the cost effectiveness of these reforms is mixed at best. Furthermore, there may be little connection between the outcomes such reform models are “proven” to accomplish and the outcomes policymakers hope to achieve.

For practical reasons, resource-oriented analyses rely on a limited set of prototypical districts, which can lead to problems when actual school districts differ from the prototypes. For example, it can be difficult to estimate the costs of operating a district with 600 pupils, when prototypes have been estimated with 200 pupils and 1000 pupils. Similar issues exist in the accommodation of student needs, where only a limited range of possibilities may be feasibly represented in the prototypes. The greater the difference between the prototypes and the actual schools, the greater the margin for error. Even apparently subtle differences in applying the prototypes to the real world (such as choosing to interpolate between prototypes linearly instead of nonlinearly) can lead to significantly different cost estimates.

Resource-oriented analyses frequently prescribe sharp increases in resource utilization, but tend to presume that implementing such changes will have no effect on resource prices. If the increase in demand resulting from the new intensity requirement drives up the price of inputs, then the total cost predictions from the analysis will be greatly understated.

In summary, to use an analogy, with resource-oriented analysis, you know the mode of transportation you’re going to take, but you’re not sure exactly where you’re going.

## **Performance-Oriented Methods**

### ***Strengths***

The primary strength of performance-oriented models is that they establish a direct link between education costs and desired outcomes. Understanding the link between costs and outcomes and designing aid formulas based on this understanding is arguably a critical objective in an era of increased emphasis on standards and accountability.

### ***Weaknesses:***

A central difficulty of performance-oriented analysis involves the politics of achieving consensus regarding important outcomes and the empirics of precisely measuring those outcomes. Many outcomes that policy-makers consider important may be too difficult to measure, and that which is measured well may be a biased representation of that which we hope to achieve. The Cost Function approach is data intensive, requiring high quality measures of school district performance and expenditures. Many states lack the necessary data to conduct such analyses. For example, Maryland does not collect detailed data on school expenditures. Thus, although the state of Maryland was able to identify 104 schools that it considered to be successful, researchers conducted a Successful Schools analysis on a narrower sample of less than 60 schools on the grounds that it would be difficult to obtain fiscal data from the full 104 within the time available. Cost Function analyses on the basis of such a small sample would be problematic.

A difficulty with more complex statistical methods like education Cost Functions is that both the underlying methodologies and eventual outcomes of those methodologies can be difficult to understand and difficult to communicate to constituents. The underlying methodologies may rest on theoretical and analytical assumptions with which informed parties may disagree. Statistical modeling inherently involves errors of estimation. While other methodologies are also vulnerable to error and bias, there can be political resistance to methodologies that reveal the inherent imprecision of social science.

By design, statistical models describe relationships within the experience of the data. It is problematic to extrapolate beyond that experience to predict the costs associated with a level of performance that is not regularly achieved, or is not achieved by districts with a particular set of geographic and demographic characteristics.

While performance-oriented methods like Cost Function analyses estimate a statistical relationship between spending and outcomes, they do not provide specific insights into how districts should internally organize their resources to effectively and efficiently produce outcomes.

In summary, again, with performance-oriented analysis, you know where you're going and how much money it should take to get there, but you're not quite sure of the best way to go.

## **MONTANA STUDIES**

### **THE MONTANA AUGENBLICK & MYERS STUDY**

In August 2002, following six months of effort, a study requested and paid for by Montana School Boards Association, Montana Quality Education Coalition, Montana Rural Education Association, Montana Association of School Business Officials, Montana Small Schools Association and Montana Association of County Superintendents of Schools was released. The Augenblick and Myers<sup>12</sup> (A&M) study was entitled "Calculation of the Cost of a Suitable Education in Montana in 2001-2002 Using the Professional Judgment Approach". The A&M study created 5 prototype districts to represent the diversity in size within the school system in Montana. Up to 83 educators, including three members of the Board of Public Education, several nationally board-certified teachers, and elected school board members formed in panels to choose resource levels for these prototypes and applied a resource price to each resource to calculate a basic cost of a suitable education. The resource levels were chosen at levels that were expected to create improvement in proficiency scores on the Iowa Test of Basic Skills so that

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<sup>12</sup>Myers & Silverstein, Calculation of the Cost of a Suitable Education in Montana in 2001-2002 Using the Professional Judgment Approach, August 2002, at <http://www.mtsba.org/study/Final%20Report.pdf>

the amount of student improvement that is needed in five years is on target to meet the requirements of No Child Left Behind. The study did not include costs for transportation and capital outlay.

The A&M study produced basic costs of the following magnitude:

- Small K-12 districts - \$8,041 per pupil
- Moderate K-12 districts - \$6,751 per pupil
- Large K-12 districts - \$6,004 per pupil
- Very Large K-12 districts - \$6,048 per pupil
- Elementary districts - \$6,885 per pupil

The A&M study asserts these numbers compare to current spending (FY2002) of \$4,471, although no source for this number was identified.

To the basic costs for each prototype, the A&M study adds categorical costs associated with students who are at-risk, Native American, and with special education needs. (See Appendix B).

The A&M study did not calculate the increase in state support required to fund the application of the prototypes in Montana. It did not derive a funding formula that could be placed in law to distribute budget authority to individual school districts. It did not specify the state's share of these costs. It did not derive any revenue reconfigurations to fund the adequate level of resources required. The experts who conducted the study profess, however, that each of these items could be addressed with additional work built upon the findings in the study.

### **Problems with A&M study**

The A&M study – like all professional judgment studies – specifies various prototype schools of varying size. It is not clear how to apply these prototypes to existing schools or districts. Does one interpolate for schools of sizes different than the prototypes? How is the interpolation to be done, in a linear or nonlinear fashion?

In addition, the A&M study provides no guidance on the funding formula to be placed in law that will distribute the money to school districts. Because all the cost estimates in the results were put on a per student basis, and because much of the detailed district-level information remains under the proprietary control of the consultants, it would be difficult to define what the fixed components of the funding formula would need to be. All proprietary information forming the basis of the report is currently in the possession of the State of Montana through its assigned counsel Brian Morris, and is available for use by the State in analyzing and/or implementing the findings of the A&M study. The only restriction on the information at this point is an informal agreement between counsel for the state and MQEC not to publicly disseminate the proprietary documents, which A&M contend are trade secrets that they wish to protect against such disclosure. However, the information available to the assigned counsel is extremely limited and is not very useful in deriving a funding formula for real districts.

## **1988 WHITNEY-NICHOLS STUDY ON THE COST OF THE MONTANA ACCREDITATION STANDARDS**

The 1988 “Whitney-Nichols” LFA Study Costing-out the Montana Accreditation Standards (See Appendix C) and the subsequent study costing out new proposed standards (close to what is in effect today) was a simple counting and pricing of personnel (and related) costs required by Montana input



accreditation standards. The table below shows counts of various personnel under the then-current standards, the proposed standards, and under actual employment in fiscal 1986. Compared with actual FTE, the new standards would have required 1,341 less teachers, 3 more superintendents, 11 more principals, 157 more counselors and 74 more librarians. Compared with fiscal 1986 actual state spending, the proposed standards would have increased state spending by \$63 million. Then-current state spending (foundation and the permissive levy) was 81.7 percent of the calculated cost of the proposed standards.

**Comparison of Actual FTE with FTE Required under Current and  
Proposed Standards - Fiscal 1988**

Employees	FTE			FTE Comparison		
	Actual	Current Standards	Proposed Standards	Actual Less Current	Actual Less Proposed	Current Less Proposed
Superintendents	155.3	151.5	152.5	3.8	2.8	(1.0)
Principals	459.6	335.0	470.5	124.6	(10.9)	(135.5)
Teachers	9,129.0	7,547.5	7,787.5	1,581.5	1,341.5	(240.0)
Counselors	318.7	157.2	475.9	161.5	(157.2)	(318.7)
Librarians	325.2	237.3	398.9	87.9	(73.7)	(161.6)

Memo From Sandy Whitney and Curt Nichols (LFA) to K-12 Education Subcommittee on Cost of Complying with the Proposed Accreditation Standards, June 23, 1988

Later work by an education subcommittee of the LFC was completed in 1988 that specified options for building a funding formula and the revenue options to pay for it. This included a phased in maximum budget, and a local share in which power equalization would apply. The recommendations were adopted by the LFC but no law resulted from the proposals.

The Whitney-Nichols study had weaknesses. Personnel compensation (wages and benefits) was actual averages in each district, or the state average if data were not available. No market study of what compensation should have been (i.e. in comparison with neighboring states, or an analysis based on supply and demand for various teacher characteristics) was conducted. In addition the study did not address special education, buildings and facilities adequacy, Indian education, or the extent to which the “basic quality education” guaranteed in the Constitution requires more than meeting the input standards.

A new study “costing out the current Accreditation standards” could be done by one of the experts in Appendix D, or possibly by an in-state consultant. If such a study were to be done, it could provide a level of cost associated with standards that have been characterized by both Judge Sherlock and the Montana Supreme Court as “minimum standards upon which quality must be built.” (See, *Helena Elementary School Dist. No. 1 v. State* (1989), 236 Mont. 44 at 52; see also finding 88). Such a study probably would not meet the requirements of the Sherlock decision however, which requires that the State address all the standards governing the operation of public schools, including but not limited to NCLB, IDEA, accreditation input standards, performance and content standards, prevailing wage, etc. (see finding 2, 136, 195).

## **TIMEFRAMES, DATA, AND STAFF RESOURCES**

It is approximately 3 months until the opening of the legislative session. Adequacy studies require a minimum of 6 months to complete, and may take up to 18 months. The Sherlock decision requires some action be taken by the legislature by October 1, 2005. Adequacy studies usually require an extensive data collection effort on student characteristics and performance measures, teacher characteristics, and district characteristics, as well as historical spending and revenue. The LFD does not have the time or resources to complete an in-house study.

An adequacy study by outside consultants could begin immediately. However, the LFC would have to do the following things to initiate such a study, possibly via the work of a subcommittee.

- Choose a methodology to employ
- Write an RFP and submit to potential consultants
- Decide the scope of the study, i.e., whether to have consultants derive a funding mechanism and devise a revenue reconfiguration that would fund the new system

The risk in moving on this now for the LFC is that the definition of educationally relevant factors would have to either be determined by the LFC or the consultant, without buy-in by the legislature or the educational community and other stakeholders. If this risk is unacceptable, the LFC may want to:

- Form a subcommittee to develop recommendations to the legislature regarding the feasibility and desirability of conducting a new adequacy study
- Accept the latest Montana adequacy study and extend it to develop a funding formula
- Do a study which determines the cost of the accreditation standards only, try to devise a funding formula based on studies in other states
- Develop background information on the current system so that a future adequacy study could be completed more expeditiously

## **USING OTHER STATE'S MODELS**

It may be possible to forego a cost study and use the funding formula of a state similar to Montana's, with modifications for numbers and kinds of factors in the formula, and specified with Montana data. This would be a risky alternative that may not pass judicial muster, and would not be costless. A look at Wyoming's funding formula shows why.

Wyoming hired the firm Management, Analysis and Planning (MAP) in 1997 to develop cost studies for its K-12 system. The professional judgment method was utilized and a funding formula was derived and placed in law in time for the 1999 school year. In 2001, the judge in the case declared some parts of the formula needed to be changed due to insufficient justification behind the adjustments for costs associated with at-risk and special needs students. MAP was again hired to do a more rigorous study of these costs and a new funding formula was placed in law in 2004. In the Wyoming case, the judge has ordered a review and recalibration of the funding formula every five years. The Wyoming legislature will employ another firm to do this work in the 2006 school year. According to Dave Nelson, Wyoming Legislative Services Office, the study will take a year and a half, and will cost between \$300,000 and \$500,000, and be in place for the 2008 school year. In addition in Wyoming, the legislature chose to fund with state dollars all school capital construction and purchases, as well as all operation and maintenance of capital items. A large portion of the "several millions" spent on studies in Wyoming since 1997 has been consumed by this work for facility needs assessment, for engineering studies, and to develop priority lists for funds.

Arkansas is the only state whose court has ruled that the new cost-based funding formula placed into law is adequate. Arkansas employed Larry Picus and Associates who performed an Evidence-Based study

that was completed in 2003, and placed into law for the 2004 school year. It showed that adequacy requires a 33 percent increase in spending by districts, and the legislature of Arkansas raised the general sales tax in the state by 1 percent to pay for the added costs. According to Mark Hudson, Legislative staffer, the Picus study cost between \$350,000 and \$500,000.

## **ISSUES**

### **THE SHERLOCK DECISION**

The Sherlock Decision finds the state share of school spending too low. Did the Sherlock decision also find that total resources available to the Montana school system inadequate? It is difficult to conclude that the Sherlock decision found total resources inadequate, since it says “to satisfy the Montana Constitution, the State's school finance system must be based upon a determination of the needs and costs of the public school system, and the school finance system must be designed and based upon educationally-relevant factors” (Pg 51). That is, we can't know if total school resources are inadequate until a study of the cost of educationally relevant factors is completed.

However, the Sherlock decision seems to contradict this when it states “This Court hereby rules that the current Montana school funding system violates Article X, Section 1 of the Montana Constitution in that it fails to provide adequate funding for Montana's public schools.” (Pg. 51, Conclusion No 9). In finding 152, the State of Montana is implicated in funding schools inadequately. (“152. The A&M study merely supports other evidence that shows that the State of Montana is not adequately funding public education. Also, it demonstrates methods the State could employ to analyze and construct a funding system that is rationally based on the costs that must be necessarily incurred to meet the standards and requirements that govern public education in Montana.”) Does this mean the whole Montana system, or just the state's share?

In findings of fact 195, the Sherlock opinion states “the funding system must be based on the costs of meetings the standards that govern Montana's schools”. Does the word standards mean the Accreditation Standards (both input and content and performance standards), or standards understood more broadly, possibly standards required by NCLB, IDEA, as well as the variety of standards governing how school districts are conducted in Montana, including mandates set forth throughout the Montana code with regard to items such as prevailing wage, public contractors' license fee, same salary for tenure staff, compliance with building codes and access for the disabled?

### **THE SUPREME COURT DECISION**

It is anticipated that the Supreme Court will make a decision on Columbia Falls v. Montana before the legislature convenes. A study could not be completed before the legislature convenes, and it would be difficult to complete a study during the legislative session.

If the Supreme Court finds for the state, should a study of the cost of educationally relevant factors nevertheless be done?

### **WHAT SHOULD BE INCLUDED IN A COST STUDY?**

- The Accreditation Standards
- The Accreditation Standards plus other educationally relevant factors
- What are educationally relevant factors, and do we have data on those factors?

## WHO CAN CHANGE THE ACCREDITATION STANDARDS?

In 1992, Judge Sherlock in *Montana Board of Public Education v. Montana Administrative Code Committee* found that “the Board of Public Education, pursuant to Article X, Section 9(3), of the Montana Constitution, is vested with constitutional rule making authority. This provision is self-executing and independent of any power that is delegated to the Board by the legislature<sup>13</sup>”. This case was not appealed to the Montana Supreme Court.

Greg Petesch, Chief Legal Counsel to the legislature, stated in a hearing before the interim Tax Reform Committee and in a meeting of the Legislative Finance Committee, (June 2004) that this ruling is challengeable by the legislature because the Constitution gives the legislature sole powers to appropriate money from the treasury, and if the Board may promulgate standards for which the state must appropriate more money, then the powers of each body is in conflict.

## COST VERSUS FUNDING MECHANISM

If a study were to be done, what would be the scope of the study? Would the consultants define what is to be cost out, do the analysis, develop a funding mechanism and determine the revenues required to fund the district and state’s shares?

A criticism of the A&M study was that no funding mechanism by which to allocate budget authority to each district could be derived due to proprietary issues. **It is imperative that such data be available from consultants so that a funding mechanism may be placed in law. The A&M data supplied to the State’s assigned counsel is not sufficient to derive a funding mechanism that would determine the distribution of budget authority for actual, as opposed to, prototype districts.**

## DIFFERENCE OF PERSPECTIVES

The Educational Community – the Board of Public Education, OPI, school boards, teachers and administrators, parents and taxpayers – consists of groups that have different perspectives regarding the Sherlock decision.

It is prudent that any study of the cost of educationally relevant factors receive the acceptance of all these groups. This is extremely difficult as efforts in other states, Wyoming in particular, attest.

## FUNDING AND RESOURCES

A study of the cost of educationally relevant factors will require funding and time. Even a relatively smaller study, such as the Whitney-Nichols study costing out the Accreditation Standards, would exceed the staff time of the LFD.

If a study is contemplated to begin before the start of the legislative session, funding will be required. Where will this money come from?

## “BENCHMARK” STUDY

A majority of Legislative leadership plus the Tax Reform Committee requested the LFD to do a benchmark study costing out the accreditation standards. While it would intuitively seem prudent to know the cost to meet existing standards, there are several reasons why this would be difficult to do or

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<sup>13</sup>Montana Board of Public Education v. Montana Administrative Code Committee, Montana First Judicial District Court, Judge Sherlock, March 12, 1992.

would produce a less than meaningful product. First, a benchmark study could not be done in-house by the LFD due to lack of time, unless additional staff were hired. Otherwise, it would have to be done by an outside consultant. Depending on the method selected, the minimum cost would be \$30,000 and could exceed \$100,000. A source of funding would have to be identified in order to do this study.

Second, it is not clear that the product would be useful. The Sherlock decision states, quoting from the *Helena Elementary I* decision: “Thus the Montana School Accreditation Standards do not fully define either the constitutional rights of students or the constitutional responsibilities of the State of Montana for funding its public elementary and secondary schools<sup>14</sup>.” Costing out the accreditation standards, as in a Whitney-Nichols study, would give the legislature limited information relative to existing costs and would divert the attention of the legislature from working toward a solution to the lawsuit, i.e., defining and costing out all educationally relevant factors in a quality system of education.

In view of the significant resources required to develop a benchmark cost and concerns about the relative value of such a study, the LFC needs to direct staff whether such a study would be a good investment and if so, advise where funds for the study might be obtained.

## CONCLUSION

This report has identified the complexity of the legislative task at hand should the Supreme Court uphold the District Court decision that the current state method of funding K-12 education is unconstitutional, and that a new funding method must be adopted that takes into consideration educationally relevant factors in adequately funding a quality education. As discussed in this report, there are few examples of a successful funding methodology developed by other states, and the prevailing acceptable methods of costing out adequate funding for a quality education are complex, time intensive, expensive, and have numerous identified weaknesses. The outcome of studies by other states leave doubt about the reliability of study results. At the same time, the Court appears to believe that such an approach is a significant and necessary improvement over our current system (see finding 193, where the Court specified that the Professional Judgement approach “is much more reliable and accurate than the approach that was used in formulating the current system and the actions taken by the state in respect to funding since the enactment of HB 667.”

More broadly, this study of the market for educational studies shows that several legislative policy decisions should probably be made before hiring a consultant or using other resources to meet the requirements of the school funding lawsuit. These include:

Defining educationally relevant factors, and determining if data are available on the selected factors

- Deciding upon a type of costing out methodology
- Deciding if the defined educationally relevant factors require that new data be collected by OPI (such as teachers wages and richer teacher characteristic data)
- Deciding on the scope of the study (i.e., in addition to a cost study, will it include a reconfiguration of revenues?)

These significant policy decisions cannot be made by staff. Further, fiscal staff can do little to begin preparing to assist the legislature in this task until the legislature can address these policy decisions and provide at the least a general direction for addressing the issues. The complexity of this task and the

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<sup>14</sup> Findings of Fact, Conclusions of Law and Order, Judge Sherlock, First Judicial District Court, in *Columbia Falls v. State of Montana*, April 15, 2004. Conclusion number 11, pg. 51.

potential six to eighteen month timeframe needed to do an adequacy study if deemed necessary points out the time constraints when facing an October, 2005 deadline under the district court ruling.

LFD staff assumes it will play a significant role in assisting the legislature in developing a new funding methodology for K-12 education, and will work to identify what baseline data would be useful in preparing for the session. In addition, staff will work to provide suggestions for facilitating the legislative process in this endeavor. The LFC may wish to identify what their expectations are for LFD staff assistance on this issue, both in preparation for and during the session. The LFC may also wish to identify their priorities for staff work on this issue. Given the magnitude of this task, it is almost certain that additional staff resources will be needed, and the LFC may wish to discuss options with staff for obtaining adequate resources.

## **LFC OPTIONS**

The LFC may want to consider one or more of the following options:

- 1) Work before the legislative session to analyze the following options:
  - a) Accept the A&M study and begin an RFP process to employ Myers and Silverstein to develop a funding formula, and possibly a new revenue configuration.
  - b) Begin the RFP process for a Whitney-Nichols type study, employing one of the firms listed in Appendix D, or in-state consultants.
  - c) Begin the RFP process for a full-blown cost analysis, employing one of the firms listed in Appendix D.
  - d) Begin the RFP process for a study which utilizes the funding formula from a state which has gone through the cost analysis and funding formula stages, employing one of the firms listed in Appendix D, or in-state consultants.
- 2) Wait for the Supreme Court to rule, and let the legislature decide what to do. In the meantime, direct staff to develop background information on the current funding system (historical spending and revenues, how budget authority is calculated, how revenue is budgeted, how student and teacher characteristics are distributed across the state, what data OPI is able to provide and what data they are unable to provide).
- 3) Decide whether to authorize a “benchmark” study of the cost of existing accreditation standards and to identify a source of funding for the study.
- 4) Clarify expectations of LFD staff in assisting the legislature to prepare for this complex task.

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## APPENDIX A

### STATE-BY-STATE SUMMARY OF STUDIES OF EDUCATIONAL ADEQUACY

State	Performed by:	Sponsored by:	Year of Study	Analytical Method	Estimated Basic Cost
<u>State Government Sponsored Studies</u>					
Mississippi	Augenblick & Myers, Inc.	State Dept. of Education	1993	Successful Schools (District Level)	\$2,614
Illinois		Illinois State Board of Education	1996	Successful Schools	\$4,225
Ohio	Augenblick & Myers, Inc.	Ohio Dept. of Education	1997	Successful Schools (District Level)	\$4,269 (in 1999)
Wyoming	Management, Analysis & Planning, Inc.	Legislature	1997	Professional Judgment (School Level)	E: \$6,165; M: \$6403; H: 6,781
Illinois	Internal	Illinois State Board of Education	1998	Professional Judgment	K-3: \$6,604; 4-6: \$5,022; JH/MS: \$5,132; HS: \$5,393
New Hampshire	Augenblick & Myers, Inc.	Legislature	1998	Successful Schools	Elementary, \$4,681 Secondary \$5,449
New Hampshire	Augenblick & Myers, Inc.		1998	Successful Schools (School)	
New Jersey	Allan R. Odden, U. of Wisconsin And Consortium For Policy Research in Education	Court - Legislature	1998	Evidence-Based	\$8,864
Oregon	Internal (reviewed by Management, Analysis & Planning, Inc.)	Legislature	1997/2000	Professional Judgment (QEM)	\$5,762
Louisiana	Augenblick & Myers, Inc.	State Board of Education	2001	Successful Schools (S)	\$4,234
Illinois	Augenblick & Myers, Inc.	Education Funding Advisory Board	2001	Successful	\$4,600
Kansas	Augenblick & Myers, Inc.	KS Legislature	2001	Professional Judgment	\$5,811
Kansas	Augenblick & Myers, Inc.	KS Legislature`	2001	Successful Schools (D)	\$4,547

State	Performed by:	Sponsored by:	Year of Study	Analytical Method	Estimated Basic Cost
Maryland	Augenblick & Myers, Inc.	Thornton-Commission	2001	Professional Judgment (S)	\$6,612 (\$10,631/SPED)
Maryland	Augenblick & Myers	Thornton Commission	2001	Successful Schools (S)	\$5,969
Kentucky	Lawrence O. Picus & Associates	State Board of Education	2003	Professional Judgment	
Kentucky	Lawrence O. Picus & Associates	State Board of Education	2003	Evidence-Based	\$6,130 to \$8,303 (Very Large)
Arkansas	Lawrence O. Picus & Associates	Legislature	2003	Evidence-Based	
North Dakota	Augenblick, Palaich & Associates	Legislature	2003	Professional Judgment	\$6,005
Maine	Management, Analysis & Planning, Inc.			Professional Judgment	
California	California Quality Education Commission		in progress	Professional Judgment (Quality Education Model: QEM)	
<b><i>Special Interest Group Sponsored</i></b>					
South Carolina	Augenblick & Myers, Inc.	School Boards Association	2000	Professional Judgment	\$6,189
Maryland	MAP	Maryland Education Coalition	2001	Professional Judgment	\$7,461 to \$9,313
Nebraska	Augenblick & Myers, Inc.	Coalition of special interests*	2002	Professional Judgment	\$5,845 (large K-12 district)
Indiana	Augenblick & Myers, Inc.	State Teachers Association	2002	Professional Judgment	\$7,094 to \$7,365 (large to small)
Montana	Augenblick & Myers, Inc.	Coalition of special Interests*	2002	Professional Judgment	\$7,681 to \$9,954
Colorado	Augenblick & Myers, Inc.	Colorado School Finance Project	2003	Profession Judgment	\$6,815
Colorado	Augenblick & Myers, Inc.	Colorado School		Successful Schools (District Level)	\$4,768 to \$4,845
Missouri	Augenblick & Myers, Inc.	Missouri Education Coalition for Adequacy	2003	Professional Judgment	\$7,832



State	Performed by:	Sponsored by:	Year of Study	Analytical Method	Estimated Basic Cost
Missouri	Augenblick & Myers, Inc.	Missouri Education Coalition for Adequacy		Successful Schools (District Level)	\$5,664
Kentucky	Deborah Verstegen University of Virginia	Council for Better Education, Inc.	2003	Professional Judgment	\$6,551 (very large K-12 district)
New York	American Institutes for Research & Management, Analysis & Planning	Campaign for Fiscal Equity & School Boards Association	in progress	Professional Judgment	
<u>Adequacy Studies or Cost Analyses by Independent Researchers</u>					
Wisconsin	Institute for Wisconsin's Future		2002	Professional Judgment	\$8,500
Washington	Rainer Institute		2003	Professional Judgment (Quality Education Model)	E: \$8,393 M: \$7,830 H: \$7,753
Wisconsin	Reschovsky & Imazeki	Ind. Research	1997/ 2001	Cost Function	\$6,372
Texas	Reschovsky & Imazeki	Ind. Research	1999/ 2001	Cost Function	
New York	Duncombe & Lukemeyer	Ind. Research	2000/ 2003	Cost Function	\$9,532 (Standard = 160)
New York	Duncombe & Lukemeyer	Ind. Research	2000/ 2003	Resource Cost (staffing only)	\$8,352 (cost adj.)
New York	Duncombe & Lukemeyer	Ind. Research	2000/ 2003	Empirical Identification	\$8,468 (cost adj.)

## APPENDIX B

**Table 1**  
**Summary of Resources for Prototypic Elementary**  
**Schools from Professional Judgment Panels in Several States**

<b>School Element</b>	<b>April 7 Arkansas Proposal</b>	<b>Kentucky, Picus &amp; Odden</b>	<b>Kansas, Augenblick &amp; Meyers</b>	<b>Nebraska, Augenblick &amp; Meyers</b>	<b>Montana, Augenblick &amp; Meyers</b>	<b>Maryland, Augenblick &amp; Meyers</b>
School configuration	K-5	K-5	K-5	K-6	K-5	K-5
School size	500	400	430	350	360	500
Class size	K-3: 15 4-5: 25	~20	~20	~17.5	~21	~15
Full day kindergarten	Yes	Yes	Yes	Yes	Yes	Yes
Length of teacher work year	10 extra days	200 days				
% Disabled	13.1%	10% moderate	14%	13%	12%	13.5%
% Poverty (free & reduced lunch)	47.7%	50%	36%	32%	24%	31%
% ELL	~4%	~4%	4%	5%	5%	3%
% Minority	28.8%	--	--	--	5% Native American	46%
Principal	1	1	1	1	1	1
Assistant Principal	0	0	0	0	0	1
Instructional Facilitators/Mentor	2.5	1	0	0	0	1
Teachers	29	24	22	20	17	33
Specialist teachers	20% more: 6	~5	4.4	2	3	6
Instructional aids	0	8	1	0	3.5	15
Teachers for struggling students	1/each 20% poverty: 2.5	1/each 25% poverty: 2	4	1	0	0
Teachers for students with disabilities	2	5	6	3.5	3.2	5.5

**Table 1 (Continued)**  
**Summary of Resources for Prototypic Elementary**  
**Schools from Professional Judgment Panels in Several States**

<b>School Element</b>	<b>April 7 Arkansas Proposal</b>	<b>Kentucky, Picus &amp; Odden</b>	<b>Kansas, Augenblick &amp; Meyer</b>	<b>Nebraska, Augenblick &amp; Meyer</b>	<b>Montana, Augenblick &amp; Meyer</b>	<b>Maryland, Augenblick &amp; Meyer</b>
Teachers for ELL students	Included in struggling students category	1	1	1	Extra 24% for each Native American student	0
Teachers for gifted students	0	0	0	0	0	0
Aids for categorical students	0		10	6	4	6
Pupil support staff	1/each 20% poverty: 2.5	3	3	2.1	1.6	7
Librarians/media specialists	Included in specialists	Included in specialists	1	1	1	1.5
Technology resource teachers	Included in Inst. Facilitators	1	1	0.5	1	2
Substitutes	10 days for each professional staff	1 permanent plus additional funds for typical use	2 permanent	10 days for each professional staff	\$19,800	3 permanent
Professional development	10 days plus \$50/pupil	10 summer days included in 200 day year, plus \$500/teacher	5 days plus \$500/teacher	5 days plus \$200/teacher	8 days	10 days
Technology	\$250/pupil	\$265/pupil	\$250/pupil	\$250/pupil	\$275/pupil	\$160/pupil
Instructional materials, equipment, student activities	\$250/pupil	\$250/pupil	\$270/pupil	\$90/pupil	\$300/pupil	\$205/pupil
Teacher salary levels	To be determined	National Average	State average	State average	State average +4.4% to comparative state average	State average +1.6% to comparative state average

**Table 2**  
**Summary of Resources for Prototypical Middle**  
**Schools from Professional Judgment Panels in Several States**

<b>School Element</b>	<b>April 7 Arkansas Proposal</b>	<b>Kentucky, Picus &amp; Odden</b>	<b>Kansas, Augenblick &amp; Meyer</b>	<b>Nebraska, Augenblick &amp; Meyer</b>	<b>Montana, Augenblick &amp; Meyer</b>	<b>Maryland, Augenblick &amp; Meyer</b>
School configuration	6-8	6-8	6-8	7-8	6-8	6-8
School size	500	500	430	680	630	800
Class size	25	20	~22	~20	~25	~22
Length of teacher work year	10 extra days	200				
% Disabled	13.1%	10%	14%	13%	12%	13.5%
% Poverty (free & reduced lunch)	47.7%	50%	36%	32%	24%	31%
% ELL	~4%	~4%	4%	5%	5%	3%
% Minority	28.8%		--	--	5% Native American	46%
Principal	1	1	1	1	1	1
Assistant Principal	0	0	1	1	1.5	3
Instructional Facilitators/ Mentors	2.5	1	0	0	0	0
Teachers	20	25	19.5	24	25	36
Specialist teachers	20% more: 4	20% more: 5	6.5	20	10	9
Instructional aides	0		1	0	6	10
Teachers for struggling students	1/each 20% poverty: 2.5		4	3	0	0

**Table 2 (Continued)**  
**Summary of Resources for Prototypical Middle**  
**Schools from Professional Judgment Panels in Several States**

<b>School Element</b>	<b>April 7 Arkansas Proposal</b>	<b>Kentucky, Picus &amp; Odden</b>	<b>Kansas, Augenblick &amp; Meyer</b>	<b>Nebraska, Augenblick &amp; Meyer</b>	<b>Montana, Augenblick &amp; Meyer</b>	<b>Maryland, Augenblick &amp; Meyer</b>
Teachers for students with disabilities	Extra weight of 2.35 for each student	7, plus 1 more if % poverty >75%	7	5	6.25	7
Teachers for ELL students	Included in struggling students category	1	1	2	Extra 24% for each Native American student	0
Teachers for gifted students	0	0	0	0	0	0
Aids for categorical students	0	0	13	8	7	6
Pupil support staff	1/each 20% poverty +1 guidance: 3.5	4.5	3.8	4.8	3.2	10
Librarians/media specialists	1	1	1.5	1	1.5	2
Technology resource teachers	Included in instructional facilitators	1	1	1	1.5	2
Substitutes	10 days for each professional staff	1 permanent Plus dollars for more	3 permanent	10 days for each professional staff	\$34,650	3 permanent
Professional development	10 days plus \$50/pupil	10 summer days included in 200 day year, plus \$500/teacher	5 days + \$500/teacher	5 days + \$200/teacher	8 days	10 days
Technology	\$250/pupil	\$265/pupil	\$250/pupil	\$250/pupil	\$275/pupil	\$137/pupil
Instructional materials, equipment, student activities	\$250/pupil+	\$250/pupil+ \$60/pupil for extra duties for teachers	\$465/pupil	\$190/pupil	\$600/pupil	\$305/pupil
Teacher salary levels	To be determined	National Average	State average	State average	State average + 4.4% to comparative state average	State average +1.6% to comparative state average

**Table 3**  
**Summary of Resources for Prototypical High**  
**Schools from Professional Judgment Panels in Several States**

<b>School Element</b>	<b>April 7 Arkansas Proposal</b>	<b>Kentucky, Picus &amp; Odden</b>	<b>Kansas, Augenblick &amp; Meyer</b>	<b>Nebraska, Augenblick &amp; Meyer</b>	<b>Montana, Augenblick &amp; Meyer</b>	<b>Maryland, Augenblick &amp; Meyer</b>
School configuration	9-12	9-12	9-12	9-12	9-12	9-12
School size	500	800	1150	1900	1300	1000
Class size	25	20	~23	~19	~20	~17
Length of teacher work year	10 extra days	200 days, including 10 summer PD days				
% Disabled	13.1%	10%	14%	13%	12%	13.5%
% Poverty (free & reduced lunch)	47.7%	50%	36%	32%	24%	31%
% ELL	~4%	~4%	4%	5%	5%	3%
% Minority	28.8%	--	--	--	5% Native American	46%
Principal	1	1	1	1	1	1
Assistant Principal	0	1	3	6.5	3	5
Instructional Facilitators/ Mentors	2.5	2	0	0	0	0
Teachers	20	40	49.5	120	81	69
Specialist teachers	20% more: 4	20% more: 8	14.5	--	--	--
Instructional aides	0		2	--	6.5	4
Teachers for struggling students	1/each 20% poverty: 2.5	8	10	8	0	0

**Table 3 (Continued)**  
**Summary of Resources for Prototypical High**  
**Schools from Professional Judgment Panels in Several States**

<b>School Element</b>	<b>April 7 Arkansas Proposal</b>	<b>Kentucky, Picus &amp; Odden</b>	<b>Kansas, Augenblick &amp; Meyer</b>	<b>Nebraska, Augenblick &amp; Meyer</b>	<b>Montana, Augenblick &amp; Meyer</b>	<b>Maryland, Augenblick &amp; Meyer</b>
Teachers for students with disabilities	Extra weight of 2.35 for each student		15	14	12	8
Teachers for ELL students	Included in struggling students category	2	2	5	Extra 24% for each Native American student	0
Teachers for gifted students	0	0	0	0	0	0
Aids for categorical students	0	--	24	13	14	7
Pupil support staff	1/each 20% poverty +2 guidance: 4.5	8	7	11	7	8
Librarians/media specialists	1.5	2	2	2	2	2
Technology resource teachers	Included in Instructional Facilitators	2	1	1	2	2
Substitutes	10 days for each professional staff	2 permanent + typical use illness and PD	9 permanent	10 days for each professional staff	\$80,000	6 permanent
Professional development	10 summer days plus \$50/pupil	10 summer days included in 200 day year, plus \$500/teacher	5 days + \$500/teacher	5 days + \$200/teacher	8 days	10 days
Technology	\$250/pupil	\$264/pupil	\$250/pupil	\$250/pupil	\$275/pupil	\$162/pupil
Instructional materials, equipment, student activities	\$250/pupil+	\$150/pupil+ \$120/pupil for extra duties for teachers	\$635/pupil	\$530/pupil	\$900/pupil	\$850/pupil
Teacher salary levels	To be determined	National Average	State average	State average	State average + 4.4% to comparative state average	State average +1.6% to comparative state average

## APPENDIX C

### Accreditation Standards

#### **Montana State Constitution**

Article X, Section 1: (1) It is the goal of the people to establish a system of education, which will develop the full educational potential of each person. Equality of educational opportunity is guaranteed to each person of the state.

(2) The state recognizes the distinct and unique cultural heritage of the American Indians and is committed in its educational goals to the preservation of their cultural integrity.

(3) The legislature shall provide a basic system of free quality public elementary and secondary schools. The legislature may provide such other educational institutions, public libraries, and educational programs as it deems desirable. It shall fund and distribute in an equitable manner to the school districts the state's share of the cost of the basic elementary and secondary school system.

#### *Staffing Ratios<sup>15</sup>*

##### *Administrative Personnel:* .

- .5 FTE for schools with 9-17 certified staff;
- 1 FTE for schools with 18-29 certified staff or 250-550 students
- 2 FTE for schools with 551-1050 students;
- 3 FTE for schools with 1051-1550 students;
- 4 FTE for schools with 1551-2050 students; and
- 5 FTE for schools with 2051 or more students.

*Library Media Services:* Districts with fewer than 125 students shall employ or contract with a certified, endorsed school library media specialist, or seek alternative ways to provide library media services, using certified personnel.

- .5 FTE for schools with 126-250 students;
- 1 FTE for schools with 251-500 students;
- 1.5 FTE for schools with 501-1000 students;
- 2 FTE for schools with 1001-1500 students;
- 2.5 FTE for schools with 1501-2000 students;
- 3 FTE for schools with 2001 or more students.

*Guidance Staff:* Minimum of 1 FTE counselor for 400 elementary (K-8) students, and minimum of 1 FTE for 400 high school students. Counselor/student ratio shall be prorated. Districts with less than 125 students shall employ or contract with a certified guidance specialist, or seek alternative ways to provide guidance services.

#### *Class Size:*

- Elementary:* No more than 20 students in kindergarten and grades 1 and 2;
- No more than 28 students in grades 3 and 4;
- No more than 30 students in grades 5 through 8;

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<sup>15</sup> Myers and Silverstein (A&M study), at <http://www.mtsba.org/study/Final%20Report.pdf>



In multi-grade classrooms, the maximum class size shall be:

No more than 20 students in grades K, 1, 2, and 3;

No more than 24 students in grades 4, 5, and 6;

*Elementary:*

No more than 26 students in grades 7 and 8.

Multi-grade classrooms that cross grade-level boundaries shall use the maximum of the lower grade.

In one-teacher schools, the maximum class size shall be 18 students.

Instructional aides are mandatory when class size exceeds the standards, assigned at a minimum of 1 ½ hours per day, per student overload, up to six hours.

*Junior High/Middle School and High School:*

Individual class size shall not exceed 30 students.

Class size limits do not apply to instrumental music or choral programs.

The number of students assigned to a teacher per day shall not exceed 150.

Teachers with a significant writing program shall have a maximum load of 100 students.

*Academic Requirements:*

*Middle School Program:* Visual arts (art history, art criticism, aesthetic perception and production); English/Language Arts (literature, language study, reading, writing, listening and speaking); Health Enhancement (health and physical education); Social Studies; Mathematics (written and mental computation and problem solving); Music (general, instrumental, vocal);

Science (basic science incorporating physical and life science); Vocational/Practical Arts (agriculture, business education, home economics, industrial marketing);

Second Language;

Exploratory Courses (creative writing, dance, drama, photography).

*7th and 8th Grade Program:* English/Language Arts (one unit each year to each grade level);

Social Studies (one unit each year to each grade level); Mathematics (one unit each year to each grade level); Science (one unit each year to each grade level); Health Enhancement (one-half unit each year to each grade level); Music (one-half level each year to each grade level);

Second language (one-half unit each year to each grade level);

Visual arts (one-half unit each year to each grade level); Vocational/Practical Arts (one-half unit each year to each grade level).

*High School: (Basic Education Program Offerings):*

4 Units of English/Language Arts;

3 Units of Mathematics;

3 Units of Science;

3 Units of Social Studies;

2 Units of Vocational/Technical Education;

2 Units of Arts;

1 Unit of Health Enhancement;

2 Units of World Languages; and

2 Units of Electives.

Students must complete 20 of these 22 units to meet graduation requirements. A unit of credit is defined as the equivalent of at least 225 minutes per week for one year.

In addition, each program shall meet all of the Program Content Standards as defined by Chapter 54 of the Montana School Accreditation Standards and Procedures Manual.

## APPENDIX D

### Education Researchers

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## APPENDIX E

### Internet Resources for Documents in the Sherlock Decision, and Other Resources

<http://www.mtsba.org/mqec/mqec.htm> - a portal with the complaint by MQEC, pre-trial brief's by MQEC and the State, also the A&M study

<http://www.mtsba.org/currenttemp/litigation/schoolfundingdecision.htm> - Sherlock's decision April 15

[http://www.mtsba.org/currenttemp/litigation/statebrief\\_supcourt.pdf](http://www.mtsba.org/currenttemp/litigation/statebrief_supcourt.pdf) - Aug 9th Brief of appellant (by Brian Morris - State Solicitor)

<http://www.mtsba.org/currenttemp/litigation/mqecbrief.pdf> Aug 30 answer brief (answering state's brief) by Jim Molloy (MQEC lawyer)

<http://www.capitol.state.tx.us/psf/Reports/school%20outcomes%20and%20school%20costs.doc2.pdf> - Texas adequacy study

[http://www.manhattan-institute.org/html/ewp\\_06.htm](http://www.manhattan-institute.org/html/ewp_06.htm) - Interesting Manhattan Institute Study across all states

<http://www.capitol.state.tx.us/psf/Reports/Measuring%20Educational%20Adequacy.pdf> - Bruce Baker Paper